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Enforcement

Report an Environmental Violation - Information submitted

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Your Name:	Kenneth Gelting, PE
Your Email:	ken.gelting@nycap.rr.com
Your Address:	6 Hillcrest Drive
Your City:	Ballston Lake
Your State:	New York
Your Zip:	12019
Your Phone:	518 877 8292

Suspected Violation Date:	05/08/2014
Suspected Violator Name:	Bechtel Marine Propulsion Corporation
Suspected Violator Address:	350 Atomic Project Road
Suspected Violator City:	West Milton
Suspected Violator State:	New York
Suspected Violator Zip:	12020

Still Occurring:	no
Notified State DEP/DEQ/DEM:	no
Department Contact:	N/A; not aware if suspected violation still occurring
Characterized incident as:	
Intent:	Unknown
Type:	Falsified
Media:	Land
Entity:	Company

My name is Kenneth Gelting. I am a senior environmental engineer with 30+ years of experience in the environmental engineering and environmental compliance fields. I am a New York State Registered Licensed Professional Engineer (PE). I believe I have extensive experience and knowledge in EPA SPCC, EPA UST (40 CFR Part 280) and NYSDEC PBS and CBS. I was hired by Bechtel Marine Propulsion Corporation (BMPC) at the Knolls Atomic Power Laboratory - Kesselring Site (West Milton, NY) on May 30, 2011 as an environmental engineer in their ESH/Environmental Engineering Group. I was assigned as the technical program lead environmental engineer for the site's EPA SPCC, EPA UST and NYSDEC PBS compliance programs. Upon my hire and technical work assignment, I inherited Kesselring Site SPCC Plan Revision 19 dated April 2010, signed and certified by a NYS Registered Licensed Professional Engineer. The site's SPCC-jurisdictional (and NYSDEC PBS-jurisdictional) oil inventory included a 60,000 gallon AST and an identical 30,000 gallon AST, both storing No. 2 Fuel Oil for use in the onsite boilers. The SPCC Plan Revision 19 described these two identical tanks as being installed in 1982 and being single-walled steel tanks "Aboveground - in contact with an impervious barrier." The secondary containment system provided for the two tanks was described as (and only as) being the visually-observable aboveground open-topped dike structure constructed of reinforced concrete within which the two tanks were situated. The volume of the secondary containment dike system was described as being 90,000 gallons; associated volume calculations were not included in the SPCC Plan, but this specified volume correlated with calculations of the secondary containment system separately maintained on file. The underlying dimensions for the

calculations were of (and only of) the visually observable and previously-noted open-topped dike system. My visual observations of the two tanks indicated they were installed atop a concrete structure extending approximately two feet above the base of the secondary containment dike floor. As reference, for example, also situated within the same secondary containment dike system is a square raised concrete slab/platform with "nothing on it" except a "round unweathered footprint" resulting from a process tank that used to be situated on the slab/platform, but had been previously removed (according to site personnel). My understanding of the AST tank construction term "aboveground - in contact with an impervious surface" is that the single-walled tank bottom directly rests on an underlying impervious barrier, such that any oil leakage from the bottom/base of the single-walled AST would be retained and contained by the underlying impervious barrier, with the released oil flowing outward to and ultimately daylighting from beneath the tank, at the tank edge, within the open-topped secondary containment dike system, where it would be visually observed. The SPCC Plan Revision 19 identified the method of leak detection for the two tanks as (and only as) being "visual observation." Separately, the two tanks were registered with NYSDEC within the Department's PBS program. The detailed tank construction information provided for the two tanks in the PBS Registration application that I likewise inherited upon my hire was 100% identical with that information provided within SPCC Plan Revision 19, as summarized above; no differing or additional tank construction information for the two tanks was included in the Registration application. The Registration application was signed by a federal government official (as the site owner) under a signature attesting, in

part, to the accuracy of the submitted application and cognizance of penalties for submitting false information. Also installed within the interior of the secondary containment dike system for the two ASTs were two 6-inch PVC capped riser pipes extending upward from the base of the dike system. The SPCC Plan Revision 19 and the NYSDEC PBS Registration application included no mention of these two riser pipes. Separate and independent from the regulatorily-required SPCC Plan and NYSDEC PBS Registration, the site maintained an internal environmental manual. This non-regulatory environmental manual identified the two noted PVC riser pipes as "tell tales" and directed the tank operator to "pump the water from the tell tales on a monthly basis and visually observe the water for the presence of oil". I had not previously ever heard of the term "tell tales." As reference, for example, separate from the two subject ASTs, the site has a UST that stores diesel fuel. Although not required for this double-walled UST that includes a Part 280-conforming continuous electronic interstitial monitoring system for purposes of leak detection, a groundwater observation well is installed adjacent to the UST, within the UST excavation; in my experience, such an additional "above-and-beyond regulatory requirements" groundwater observation well for a UST is not uncommon or unreasonable, at the owner's discretion, it likely was installed to assist with determination of the local groundwater table elevation during initial tank installation and retained thereafter, etc. Based in part on their complete lack of inclusion in the site's SPCC Plan and NYSDEC PBS Registration application, I understood that the two tell tales associated with the two subject ASTs were in fact observation wells installed through the base of the secondary containment dike system and into the upper portion of the

underlying shallow groundwater table, for purposes of monitoring a release of oil from the tanks' secondary containment system to the underlying groundwater. Based upon the collective information summarized above, it was my understanding that the 60,000 and 30,000 gallon ASTs were installed directly upon a raised concrete slab/platform (e.g., "aboveground - in contact with an impervious surface") and that the two tell tales were internal, non-regulatorily-required groundwater observation wells. In 2012, in response to SPCC-jurisdictional "material changes" not associated with the two ASTs that had occurred at the site, per 40 CFR Part 112.5, I initiated Revision 20 to the existing SPCC Plan. I completed the 100% draft of this Plan update in September, 2012 and submitted it for internal management review. At that time, having no basis or reason to believe that the existing construction description and SPCC regulatory evaluation of the 60,000 and 30,000 gallon ASTs were any different than as described in Revision No. 19, in reliance upon my visual observations of the two tanks and the signature and certification provided by the NYS Registered Professional Engineer for Revision 19, I continued without change the same description and evaluation of the two tanks within SPCC Plan Revision 20 as was provided in Revision 19. Management review of the September 2012 internal-draft SPCC Plan Revision 20 was subsequently completed in April 2013. At this time, following completion of this review, I then provided my signature and NYS Registered PE stamp on SPCC Plan Revision 20, the revised Plan was the signed by the Site Manager and the Plan revision was subsequently implemented. During 2013, as I continued my efforts at advancing site compliance in SPCC and PBS, I discovered that I did not have in the files that I inherited from my

Description of incident or hazard:

predecessors, any engineering/design/construction drawings for the two ASTs. I requested copies of any and all such drawings that may exist from the site engineering department. I was provided with a set of construction drawings for the two tanks. My review of these drawings indicated a construction design different from my then-current understanding of the tanks' construction, as summarized above. By design, the two tanks were not installed directly upon an impervious slab/surface; rather, they were installed atop a concrete "ring-wall" or concrete ring, and the ring-wall extended downward through the base of the secondary containment dike system and keyed into a horizontal concrete floating slab installed about 4 feet beneath the base of the dike system, effectively forming a subsurface reinforced concrete "chamber" or "structure" beneath each of the tanks. The tell tales were not groundwater observation wells; rather, the PVC piping extended downward through the base of the dike system on the outside of the ring-wall to the depth of the base of the subsurface slab/structure, at which point they took a 90 degree bend and penetrated horizontally through the subsurface portion of the ring-wall, into the interior of the subsurface structure, with perforated pipe sections extending further within the interior of the subsurface structure, laid along the base. Per the construction drawings, the entire subsurface structure, up through the interior of the ring-wall and all the way to the base of the single-walled tanks, including within the above-grade interior portion of the ring-wall, was filled with crushed stone, acting as a granular drainage media. Based on this construction design, different than my initial understanding, I now came to understand that the regulatorily-required secondary containment for the base of the two single walled tanks was to be

provided by the subsurface concrete structure, with the tell tales used for direct leak detection purposes for any oil leakage from the base of the tanks. Any oil released from the base/bottom of the single walled tank would not flow laterally and daylight into the open-topped dike system; rather, the released oil would flow downward through the granular drainage media (the crushed stone) where it would be retained and contained by subsurface concrete structure. The oil would then be encountered and identified by observation/pumping of the tell tales. Instead of being installed on an impervious surface, the two tanks were apparently installed directly on pervious granular drainage media, which would not allow direct visual indications of leaks. Recognizing that what I reviewed was pre-construction design drawings, and having no knowledge of actual construction, I could not be certain if as-built construction was consistent with the construction intended by the construction drawings. I inquired as to the existence of any as-built or record drawings for the completed tank construction; no such drawings were found or made available to me. I made inquiries as to whether any current site employees had any knowledge, either first-or second hand, as to that actual subsurface tank construction details; I did not identify or locate anyone with any such information. Lacking any such contrary information, over time it became assumed/understood by pertinent site staff, including myself, that the actual, currently-existing construction of the tanks was consistent with the construction drawings, relative to the subsurface and non-observable components of the tanks. Further inquiry by me indicated that water had been regularly pumped from the tell tales since at least 1992 (per one boilerhouse operator) and apparently since initial tank construction in 1982. On

September 24, 2013, the site's industrial subcontractor relocated its SPCC-jurisdictional Building 1C oil drum storage area to Building 73 and relocated its SPCC-jurisdictional designated home base storage location for its portable diesel fuel tank from Building 1C to Building 73. In response to these SPCC-jurisdictional "material site changes", per 40 CFR Part 112.5, I initiated Revision 21 to the SPCC Plan. Per 40 CFR Part 112.5, I understood that the revised SPCC Plan would need to be completed, signed and certified by March 24, 2014 (nominally; 180 days from September 24, 2013). In providing the 100% draft update for this Plan revision, my evaluation of the SPCC compliance status of the 60,000 and 30,000 gallon ASTs changed, based on the new tank construction information which I had obtained/confirmed since the date of the previous SPCC Plan (April 2013). I understood that based on the construction design for the two tanks, the described subsurface concrete structure was to provide the required secondary containment for the base of the two single-walled ASTs, per 112.7(c). I further understood that based on the current and historical regular pumping of substantive amounts of water from the subsurface containment structure, that the secondary containment was not watertight, and therefore was apparently not "sufficiently impervious to contain discharged oil" that may occur from the bottom of the tanks, per 112.8(c)(2). Accordingly, based on this current information, it was my understanding that at the current time, the required secondary containment for the base of the two ASTs was not provided as required by 112.7(c) and 112.8(c)(2). Accordingly, per 112.7(a)(1) ("include a discussion of your facility's conformance with the requirements of this part"), within the 100% draft of Revision 21 to the SPCC Plan, I

included this new information for these two tanks, identifying that based on this information, the two tanks were not in compliance with the requirements of Part 112. Within this discussion, in identifying and documenting this non-compliance, I noted that my (pending) Licensed PE certification of the completed Plan revision would exclude these two tanks, relative to my determination and certification that the facility was otherwise in compliance with Part 112. The site procedures required my manager to review and approve the 100% draft SPCC Plan revision, prior to me affixing my signature and PE certification and submittal to the site manager for his signature. My manager initiated his review of the 100% draft Plan revision on or about March 5, 2014. During the period of March 5 through April 25, 2014, through a series of draft reviews, my manager pressured me to certify that the secondary containment for the base of the two tanks was compliant with Part 112, and that the site was in 100% compliance with Part 112. My manager was not an engineer. This series of reviews of the draft 100% Plan revision continued past March 24, 2014. As noted above, I understood that per 112.5, the revised Plan was required to be completed, certified, signed and implemented by March 24, 2014 (nominally). I departed the site on vacation on April 25, 2014; at this time, the 100% draft Plan revision was still on my manager's desk, as he continued his attempts to pressure me to certify conforming compliance for the secondary containment for the base of the two ASTs. I returned to the site from vacation on May 8, 2014. Upon my return on that date, I learned that a USEPA inspector was onsite, conducting an MMI, including SPCC. I inquired of my manager whether the inspector had requested a copy of the site's SPCC Plan; he indicated that the

inspector had requested a copy of site's SPCC Plan. I inquired of my manager what had been provided to the inspector in response to this request; my manager indicated that the inspector had been provided a copy of the April 2013 SPCC Plan. Recognizing that as the certifying Licensed PE for the April 2013 SPCC Plan, that the USEPA inspector was relying upon my Licensed PE certification, in part, to evaluate the site's compliance with Part 112, and that I had new information about the regulatory compliance status of the two ASTs that I did not have in April 2013, I requested permission from my manager, as the SPCC Plan certifying Licensed PE of record, to speak with the USEPA inspector, such that I could disclose to him this new information that I had obtained subsequent to April 2013. My manager denied my request. I then made the same request for the same reason to my manager's manager; he likewise denied my request. I understood that the USEPA inspector departed the site on May 8, 2014 with the understanding that the two ASTs were in complete compliance with the requirements of Part 112. On this date, I was denied the opportunity to disclose to the USEPA inspector the new information on the two ASTs that I and site management had knowledge of. Subsequent to May 8, 2014, the site hired an independent consulting engineering firm for purposes of attempting to see if they could provide a Licensed PE certification of the secondary containment for the base of the two ASTs. Upon completion of their detailed evaluation, the engineering firm declined to provide such certification. Subsequently, on May 16, 2014, the site manager directed that the oil be drained from the two tanks and that the two tanks be physically rendered "closed" and replaced on an expedited schedule. My manager completed his review of the 100% draft of SPCC Plan Revision 21 on May 25, 2014. I

provided my signature and Licensed PE certification of this Plan revision on May 28, 2014, and the site manager affixed his signature on May 29, 2014. SPCC Plan Revision 21 included my evaluation and conclusion that the base of the two tanks were not provided with the required secondary containment per 112.7(c); this described non-compliance was excluded from my PE certification of the Plan revision. Subsequent to May 8, 2014, in late May or early June, 2014 (not certain of the specific date), I was provided with a white plastic 1-quart sample bottle of water that I was told came from one of the tell tales. The sample bottle had a hand-written white label which indicated "strong diesel fuel odor." I detected a odor similar to diesel fuel emanating from the sample bottle. I then went to the tell tale and observed a similar odor emanating from the tell tale. The existing sample bottle was subsequently sent to an independent analytical laboratory for analysis. I was provided a copy of the laboratory results by a concerned co-worker (not by my manager). The laboratory report indicated that the odor was determined analytically to be from "weathered diesel fuel." As of September 15, 2014, I understand that this laboratory sample analysis result is not being included or addressed within the scope of "regulatory closure" of the two ASTs. The information provided within this submittal was briefly reviewed (in less detail) with (b) (7)(C), (b) (6) of USEPA R2 on November 14, 2014.

Specific Directions:

Knolls Atomic Power Laboratory - Kesselring Site, West Milton, New York.

to ask a question, provide feedback, or report a problem.